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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,553	11/28/2001	Sung-Won Lee	678-716(P10063)	2837
66547 7590 05/03/2007 THE FARRELL LAW FIRM, P.C. 333 EARLE OVINGTON BOULEVARD SUITE 701 UNIONDALE, NY 11553			EXAMINER NGO, NGUYEN HOANG	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 05/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	09/996,553	LEE ET AL.	
	Examiner	Art Unit	
	Nguyen Ngo	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-12 and 20-28 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This communication is in response to the special amendment of 3/20/2007.

Changes made to the Claims have been entered. Accordingly, Claims 1-12, and 15-28 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. Claims 1, 2, 3, 15, 16, 17, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galand et al. (US 6188698), in view of Johansson et al. (US 2005/0044206), hereinafter referred to as Galand and Johansson.

Regarding claim 1, Galand discloses a queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications (transmission of packet data having various quality of service, col2 lines 60-63) and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections (a method for classifying a service class for transmission of packet data (connection) service in a two-way communication network (packet switching network being bidirectional), col3 lines 9-14). Galand further discloses;

a counter for computing the total number of red packets queued in a connection queue associated with the given priority classes (measuring a total number of packet data (counter for computing) for a period of time (duration of connection) associated with a classification of service class (priority class), figure 5a and col8 lines 1-10 and col14 lines 45-49).

that if the counter (COUNT(i)) is greater then the red threshold (Red_Thr), box 540 is entered for declaring current connection as red (determining a parameter (outcome of inequality to be red or green) based on whether the measured number of packet data (counted packets) is larger than a threshold (Red_Thr) value associated

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with a two-way communication characteristic of the packet data transmission (red characteristic), col8 lines 7-10).

of declaring the current connection depending on the comparator (figure 5a) and marking packets as excess (red packets) or non-excess (green packets) (col6 lines 4-6).

Galand however fails to specifically disclose calculating a value used to classify the service class of the packet data using the parameter. Galand however discloses the need of giving priority to packets in order to minimize delays (col1 lines 25-35).

Johansson further discloses a method to achieve a dynamic resource distribution policy in packet-based networks in which traffic is monitored against a threshold (page 3 [0026] and page 4 [0032] and figure 5a) in order to determine resource excess or deficits for traffic categories (number of packets being larger to threshold corresponding to deficits). Johansson further discloses calculating new share values for traffic classes (calculating a value used to classify the service class of the packet data using the parameter (outcome of comparing to threshold), page 3 [0027] and page 3 [0029]). It would thus be obvious to incorporate the concept of further calculating share values for traffic categories as disclosed by Johansson into the method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications as disclosed by Galand in order to ensure proper load balancing and resource management for transmission of packet data.

Regarding claim 2, the combination of Galand and Johansson, more specifically Galand discloses the switching node implementing the method comprises a receive part which receives data flow entering the node and a transmit part which outputs data flow (col5 lines55-60) and further discloses the switching node having input and output links for receiving and transmitting packets originated from a plurality of connections from a wide range of applications, (implemented over a forward link and a reverse link (network being bidirectional), col3 lines 5-8).

Regarding claim 15, Galand discloses a switching node that includes a flexible and efficient packet queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications (a service class classifying apparatus for transmission of packet data having various quality of service, col2 lines 60-63) and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections (a method for classifying a service class for transmission of packet data (connection) service in a two-way communication network (packet switching network being bidirectional), col3 lines 9-14). Galand further discloses;

a counter for computing the total number of red packets queued in a connection queue associated with the given priority classes (main processor (counter) for measuring a total number of packet data (counter for computing) for a period of time

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(duration of connection) associated with a classification of service class (priority class), figure 5a and col8 lines 1-10 and col14 lines 45-49).

that if the counter (COUNT(i)) is greater then the red threshold (Red_Thr), box 540 is entered for declaring current connection as red (determining a parameter (outcome of inequality to be red or green) based on whether the measured number of packet data (counted packets) is larger than a threshold (Red_Thr) value associated with a two-way communication characteristic of the packet data transmission (red characteristic), col8 lines 7-10).

of declaring the current connection depending on the comparator (figure 5a) and marking packets as excess (red packets) or non-excess (green packets) (col6 lines 4-6).

of a switching fabric for routing the packet data traffic (figure 2 and col5 lines 40-42).

Galand however fails to specifically disclose calculating a value used to classify the service class of the packet data using the parameter. Galand however discloses the need of giving priority to packets in order to minimize delays (col1 lines 25-35).

Johansson further discloses a method to achieve a dynamic resource distribution policy in packet-based networks in which traffic is monitored against a threshold (page 3 [0026] and page 4 [0032] and figure 5a) in order to determine resource excess or deficits for traffic categories (number of packets being larger to threshold corresponding to deficits). Johansson further discloses calculating new share values for traffic classes

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(calculating a value used to classify the service class of the packet data using the parameter (outcome of comparing to threshold), page 3 [0027] and page 3 [0029]). It would thus be obvious to incorporate the concept of further calculating share values for traffic categories as disclosed by Johansson into the method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications as disclosed by Gland in order to ensure proper load balancing and resource management for transmission of packet data.

Regarding claim 16, the combination of Galand and Johansson, more specifically Galand discloses a selection and distribution (access adapters) for synchronizing data streams from a plurality of links (call admission control for controlling the entering flow from a connection), and for transmitting the synchronized data stream to the switch (policing the traffic in function of its compliance to the connection agreed to traffic descriptors, col5 lines 60-67).

Regarding claim 19, the combination of Galand and Johansson, more specifically Galand discloses determining whether the service class is symmetric or asymmetric by measuring the total number of packet data (col8 lines 63- col9 lines 17). Examiner interprets the measuring of the total number of packet data to correlate to the measuring of delay (the number of packets received during a period of time correlating to delay) to determine the four types of priority queues.

Regarding claim 3 and 18, the combination of Galand and Johansson fails to disclose the specific limitation of claim 3. Galand however discloses that it is important to provide the network components (node and links (being forward or reverse) with mechanisms that control the priority of the packets, and process them in order to guarantee the desired QoS to their corresponding connections (col1 lines 35-40). It would have thus been obvious to include the measuring of the total number of packet data transmitted over a forward link and a reverse link in order to efficiently provide the mechanism that control the priority of packets of a switching network (being bidirectional) through certain links.

Regarding claim 17, the combination of Galand and Johansson fails to disclose the specific limitation of claim 17. Galand however discloses that an access node (switch node implementing the discussed method) be designed for supporting the access of the user existing communication equipments with their corresponding protocols, and that it is essential to know the different requirements of each traffic in order to optimize the different processes (col1 lines 20-27). It would thus be obvious to incorporate a gateway for supporting transfer of protocol between different networks to efficiently and correctly transmit packets according to their requirements (protocol) in a switching node implementing the queuing and transmission scheduling system.

Allowable Subject Matter

5. Claims 5-7, 8-12, 20-23, and 24-28 are allowed.

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6. Claim 5 and 20 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly disclose measuring a number of detected packet data; dividing a jitter value by the measured number of packet data and determining a parameter based on whether or not the divided value is larger than a threshold value associated with traffic characteristic of the packet data transmission. It is noted that the closest prior art Galand (US 6188698) shows a queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections. However the stated prior art fails to disclose or render obvious to the above underline limitations as claimed.

7. Claims 8 and 24 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly disclose determining whether a first parameter associated with characteristics of the service class identifies a symmetric service corresponding real time data or not, determining whether a second parameter associated with a period of the service class identifies a service for a predetermined period of time representing the packet data transmission occurs more than a predetermined number of times or not; and calculating a value to classify the service class of packet data using the first and second parameters . It is noted that the closest prior art Galand (US 6188698) shows

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a queuing and transmission scheduling system and method for use in a multimedia network, that ensures a suitable quality of service for a wide range of applications and further discloses classifying each of the plurality of connections as red or green depending on whether said each connection transmits excess traffic or not, so as to achieve a behavior classification of said plurality of connections. However the stated prior art fails to disclose or render obvious to the above underline limitations as claimed

8. Claims 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

1. Applicant's arguments filed 3/20/2007 have been fully considered but they are not persuasive.

2. Applicant submits that Galand does not determine whether a measured number of packet data is larger than a threshold value as claimed. Applicant further states that the COUNT(i) does not refer to counted packets, or a measured number of packet data as recited in the claims. Examiner posits that it is not unreasonable to correlate COUNT(i) to a measured number of packet data as Galand discloses maintaining a count of the total number of packets received over red connections and maintaining a count of the total number of packets received over the green connections and

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comparing the total count of packets to a threshold (measured number of packet data is larger than a threshold value, col15 lines 78-55). Galand further states that if COUNT(i) is greater than Red_Thr, the current connection is declared red (col8 lines 5-10 and figure 5A). Examiner thus posits that it is not unreasonable to correlate the teaching of Galand to determining a parameter based on whether the measured number of packet data is larger than a threshold value.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax-phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.N.

Nguyen Ngo

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